

Editorial on Advanced Microbiology Research

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Introduction

The advancement of microbiology is not only motivating but also compelling especially in the areas such as treatment of cancer. Below are few of numerous advanced research which will aid humans against cancer in the long run.

Treating Cancer with Adenovirus

Adenovirus is common virus that causes infectious disease of respiratory tract, eyes and gastrointestinal tract in humans and animals. For a long time adenovirus and other viruses have been considered suitable weapons for treatment of different types of cancer. Viruses can kill cancer cells themselves, but in recent years there has been research that virus infection in a tumor can activate the immune system against the cancer cells.

Oncolytic Virus Therapy

Some virus be likely to infect and kill tumor cells known as oncolytic viruses. These viruses are found in nature as well as viruses modified in the laboratory to reproduce efficiently in killing cancer cells without harming healthy cells.

Oncolytic viruses have long been viewed as weapons for directly killing cancer cells. When a virus contaminates a tumor cell, the virus makes copies of itself until the cell bursts.

For many reasons, some scientists consider oncolytic viruses to be a form of immunotherapy. But many in the field would agree that more research is required to understand how different oncolytic viruses work against cancer.

New immune therapy could give precision treatments

Over past years, immunotherapies – treatments which harness the power of immune system to fight cancer. These powerful new weapons are exciting and the reason because once the immune system has ‘locked-on’ to cancer cell it’s tenacious and ruthless in taking it out. For patients it work, immunotherapies can produce long lasting effects. Some also have suggested they can cure certain cancers.

Breaking down cancer’s defenses

Tumors use tricks to escape destruction by immune cells that includes releasing signals that suppress immune cells. These signals might be holding the immune system back from recognizing the shared antigens. Research team reanalyzed the adenocarcinoma samples and they found that tumors containing lots of antigens that were shared across the tumor also produced high levels of immune damping molecule called PD-L1. If scientists and researchers can harness the immune cells that

recognize these targets it could lead to new treatments.

Gene Therapy for cancer

Gene therapy uses customized treatment; it uses a patient's own T cells, a type of immune cell. A patient's T cells are extracted and cryogenically frozen so that they can be transported. Then cells are genetically altered to have a new gene codes for a protein – called a chimeric antigen receptor or CAR. This protein directs the T cells to target and kill leukemia cells with specific antigen on their surface. The genetically modified are then infused back into the patient.

This is new frontline in medical innovation with the ability to reprogram a patient's own cells to attack a deadly cancer.

In conclusion, this journal will be committed to continue its assignment to focus with the international research community to achieve the clearest possible scientific picture on the coming up horizon of Microbiology for a better life of human kind.

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